Title

Introduction to the Topaz Framework and the Ambra Publishing Platform

Abstract

This tutorial is an introduction to Topaz, an Open Source content modeling and storage framework that uses the Fedora Service Framework and Mulgara semantic technology as the core engine, and Ambra, a publishing application built on the Topaz framework. We will discuss the architecture of Topaz and some of the semantic technologies created to provide more flexibility with data than relational models. We will review the Ambra publishing application, the “Web 2.0” features built to foster collaboration and participation, and new its new methods for disseminating and sharing scientific information.

Learning Objectives

Learn about the underlying technologies of Topaz and Ambra. Learn how the Topaz and Ambra applications enable scientists, scholars and educators to participate and collaborate on online publications. Gain insight into the area of semantic technology and the next generation of publishing architectures.

Outline

Introduction
- Public Library of Science, PLoS journals, and Open Access
- “In the Beginning” - architecture choices

Topaz architecture
- Fedora Service Layer
- Mulgara RDF Triple-store

Topaz features
- Based on ORM (Object to Relational Mapping) family of software.
- Object Triple Mapping (OTM) for retrieving collections of objects.
- Object query language (OQL) designed to allow applications to query based on their object definitions instead of the underlying RDF
- Allow applications to store and retrieve large objects of data via a blob store within the same transactional boundaries.

Ambra architecture and features
- Journal content model
- Web 2.0 features (e.g. annotations, ratings, etc.)
- Integration of Web 2.0 features with traditional publishing models like
- PubMed/PMC/MedLine
- New disseminating technologies (REST-based APIs and RSS)

System requirements and administration

Future development of Ambra features